Cairo University
Faculty of Veterinary Medicine
Department of Nutrition and Clinical Nutrition

Effect of Dietary Inclusion of Palm Kernel Cake and Live Yeast on Beef Calves

Thesis Presented
By

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(B.V.Sc.; 2009, **Fac. Vet. Med., Cairo University)**

For the Degree of
M.V.Sc.

(Nutrition and Clinical Nutrition)

Under supervision of

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SUPERVISION SHEET

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Approval Sheet

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Presented by

Ahmed Mohamed Hussein

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To My Family

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ABSTRACT

A feeding trial was conducted to evaluate the effects of dietary inclusion of palm kernel cake (PKC) with or without live *Saccharomyces cerevisiae* yeast on beef cattle calves growth performance, nutrient digestibility, rumen environment parameters and some blood biochemical indices. A total of 15 un-castrated crossbred male beef cattle calves with average body weight 303.5 kg and their ages ranged from 10 – 12 months were used. The calves were distributed randomly in 5 equal groups. The experimental design was as follows: the first group (G1) fed on the basal diet, the second group (G2) basal diet with 10 % PKC, the third group (G3) basal diet with 10% + 0.4 g live yeast. The fourth group (G4) basal diet with 20% PKC and the fifth group was fed on basal diet with 20 % PKC and live yeast. The Experiment extended for 4 months. Growth performance parameters were recorded biweekly throughout the experiment. Fecal, rumen and blood samples were taken at day 0 (start), mid (2months) and at the end of the experiment (4 months).The results of growth performance indicated that the highest average daily body weight gain, total body weight gain and the best FCR were recorded for group 3 which was fed on basal diet with 10% + live yeast . Rumen parameters showed that the best total volatile fatty acids production and ammonia nitrogen concentration were recorded for G3. G4 showed significant decrease in total protozoal count compared with other groups especially at the end of experiment. Serum biochemical results of the present experiment revealed that there was slight difference between groups, but all groups still within the normal ranges. We concluded that PKC can be included in the diet of beef calves up to level 10% of concentrate mixture with live yeast to give the best effect on growth performance, rumen environment parameters and blood biochemical indices of beef calves.

Key Words: Nutrition, Live, Yeast, Beef, Calves.

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